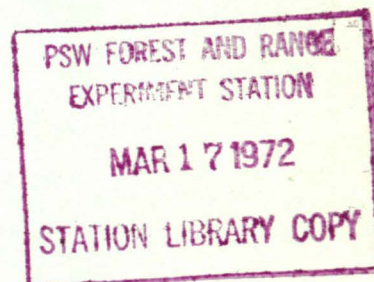


GB
124
LIS

WATER RESOURCES IN THE LAKE TAHOE REGION

*Prepared for
Tahoe Regional Planning Agency
Committee on Water Resources*

RNO



South Lake Tahoe, California
May 1971

TD225
T25
W3
1971

✓ 1/3/96

✓
UCD
UCD

Recd 57877

WATER RESOURCES COMMITTEE

Claude Dukes, Watermaster
U.S. District Court

Andrew W. Farrar, Civil Engineer
U.S. Bureau of Reclamation

M. D. Hansen, Civil Engineer
Tahoe Regional Planning Agency

William J. Newman, Ground Water Engineer
Division of Water Resources, State of Nevada

John Page, Supervisor, Central Region
California Water Resources Control Board
Division of Water Rights

Harry Siebert, Civil Engineer
U.S. Forest Service Tahoe Basin Planning Team

Jim Vasey, Ground Water and Plan Engineer
Water Planning Section, State of Nevada

CONTENTS

	Page
Acknowledgements	ii
History of Water Use	1
Operating Policy for Lake Tahoe Discharge Gates	4
California-Nevada Interstate Compact	6
Water Diversions in California	8
Water Diversions and Uses in Nevada	10
Nevada State Water Policy	12
Future Water Needs	14
Source Material	15

TD 225

T 25

W3

1971

HISTORY OF WATER USE

Water is essential to almost all activities of man. Aside from the obvious needs for household purposes, one probably thinks first of the recreational and aesthetic uses of the lakes and streams in the Lake Tahoe Basin. These uses, however, were not the first that measured the importance of Lake Tahoe for the surrounding region. Lake Tahoe water flows into the water-hungry semidesert of western Nevada and was valued highly for use in irrigation many years before Lake Tahoe became well known.

The Truckee River carries the Lake Tahoe outflow, augmented by drainage from mountain regions to the north and the northeast. In California, the Truckee provides water for power generation, fish culture, irrigation, stock watering, recreation, industrial, fire protection and municipal, as well as agricultural and domestic water supplies. In Nevada, the water is used for municipal supply in the cities of Reno and Sparks, and for agricultural, industrial, fish and wildlife, and recreational purposes throughout the reaches of the Truckee and Carson basins, and is important to the economy of a large area.

*what
fig. 1
?*

Figure 1 shows the entire Truckee River basin from its origin, south of Lake Tahoe, to its terminus in Pyramid Lake, Nevada, which has no outflow.

During the last hundred years, man's use of water in the Truckee River basin has been marred by water-rights disputes involving not only the citizens of the area, but also the California and Nevada State Governments and the Federal Government. Many of the problems have been solved, but the biggest one of all remains: providing enough water for beneficial uses in California and Nevada without causing an excessive drop in the level of the Lake, or harmfully affecting the quality of the water.

The story of large-scale use of water in the Lake Tahoe Basin began in 1865 when Colonel A. W. Von Schmidt, an engineer from Prussia, acquired some land at the Truckee River outlet of the Lake and was granted the right to build a dam across the river and to appropriate 500 cfs (cubic feet per second – more than 320 million gallons per day) of water. By 1870 Von Schmidt had completed a wooden and rock dam. In 1871 he announced a bold plan to supply San Francisco with water from Lake Tahoe by constructing a tunnel through the Sierra Nevada large enough to accommodate both a railroad line and two 6-foot-diameter conduits. The scheme was dismissed as too ambitious and costly; neither the city of San Francisco nor the Central Pacific (now the Southern Pacific) railroad was interested.

In 1870 the California Legislature granted the Donner Lumber and Boom Company, a subsidiary of the railroad, exclusive use of the Truckee River between Tahoe City and Truckee, as well as the right to build a dam at the outlet. However, because of Von Schmidt's prior rights to the outlet, the company could not fully implement their plans. Von Schmidt continued to seek acceptance of his idea but was unable to muster enough support, and eventually control of the dam passed to the Donner Company.

In 1903 the Donner Lumber and Boom Company demanded a fee from power companies along the Truckee for the privilege of using the water. In response to this demand the Fleishhacker family, who

owned two power plants that served pulp and paper mills at Floriston, California, about 15 miles downriver from Truckee, purchased the "littoral rights" to the Truckee River outlet from the Donner Company.

Under the Reclamation Act of 1902, the U.S. Bureau of Reclamation of the Department of the Interior initiated a program of supplying water from the Truckee River to agricultural lands in Nevada. The Bureau constructed a new dam at the Lake Tahoe outlet to provide greater control over the flow in the Truckee. Not certain that the purchase of "littoral rights" by the Fleishhacker interests was legal, the Bureau over a period of years negotiated with both the Donner Lumber and Boom Company and the Fleishhacker power company in an attempt to firmly acquire the necessary rights. Its efforts were foiled by lakeshore landowners, who were opposed to increased discharges from the Lake that would result in lower Lake levels.

In 1908 the Truckee River General Electric Company, predecessor of the Sierra Pacific Power Company, purchased all the power plants along the Truckee, as well as the dam and the adjacent land. The terms of the purchase included an agreement by the power company to maintain an average flow at Floriston of 500 cfs from March 1 to September 30, and 400 cfs for the other months. These required releases became known as the "Floriston Rates." At the time, they assured a sufficient supply of water for power generation in California and for irrigation in Nevada.

Also, in 1908, the Bureau of Reclamation initiated the Newlands Project, named after its principal promoter, Nevada's Senator Francis Newlands. The goal of the project was to supply water for irrigation of a large area of land near Fallon, Nevada. In 1909 the Bureau was granted control of the Lake Tahoe dam and gates by the Truckee River General Electric Company. In exchange, the Company received the perpetual right to divert the Truckee anywhere along its reach, as well as the right to locate its installations on any public lands east of the Truckee River watershed. In addition, the Government assumed the responsibility for any damage claims brought against the power company as a result of the agreement. The power company also was granted the right to construct a diversion channel from Lake Tahoe at any point along its shores; however, because of adverse public opinion, this right was never exercised.

In 1915 a Federal court decreed that the U.S. Government had the right to control discharges from Lake Tahoe.

The Truckee-Carson Irrigation District was granted the right to operate the Newlands Project and the Lake Tahoe Reservoir by the Bureau of Reclamation in 1926. The Bureau also agreed to abstain from additional diversions from the Truckee and Carson Rivers until enough water was available to irrigate 87,500 acres at Newlands, Nevada.

The water shortage problems created by a severe drought in the early 1930's led to the Truckee River Agreement in 1935. Parties to the agreement included the Bureau of Reclamation, Truckee-Carson Irrigation District, Washoe County Conservation District, and the Sierra Pacific Power Company. The States of California and Nevada and the Lake Tahoe landowners did not participate in the negotiations. Major provisions of the agreement included:

1. Maintaining the Floriston Rates, except for those periods of low lake levels occurring between November 1 and March 31. During this time the new rates were established at 350 cfs for lake levels between 6,225.25 and 6,226.0 feet, and at 300 cfs for lake levels below 6,225.25 feet.
2. Allowing water to be pumped out of the lake for irrigation, upon the consent of the Secretary of the Interior or upon the consent of the attorneys general of the States of California and Nevada, if the pumping is for sanitary or domestic purposes.
3. Fixing the low-level elevation of the lake at 6,223.0 feet above sea level and the high water level at 6,229.1 feet above sea level.
4. Constructing Boca Reservoir, which has a storage capacity of 40,000 acre-feet, on the Little Truckee River. Boca Reservoir was completed in 1939.

A Federal court decree of 1944 redefined the irrigation rights in the Truckee River basin, affirmed certain water rights of the Pyramid Indians, and clarified the rights of the power plants. Reservoir operating procedures were established so that the Floriston Rates could be maintained. Finally, the Truckee River Agreement of 1935 was incorporated into the 1944 Decree.

OPERATING POLICY FOR LAKE TAHOE DISCHARGE GATES:

As noted in the previous section, the criteria for storage of water in Lake Tahoe and release of water from the lake is set up in the 1915 Decree and the Final Order of Condemnation issued by the United States District Court, District of California, Case No. 14,816, the Truckee Vier Agreement of 1935 and the 1944 Decree issued by the United States District Court, District of Nevada, Case in Equity, No. A-3.

In the 1915 Decree and Order of Condemnation, the Court retained jurisdiction for the purpose of enforcing and exacting strict compliance with, and obedience to, all of the terms and provisions of the Decree and Order on application of either party to the action. Neither the Decree nor the Order make provision for an administrator.

In the Truckee River Agreement, provision is made for a committee (commonly called the Truckee River Basin Committee) to be composed of representatives of the Sierra Pacific Power Company, the Truckee Carson Irrigation District and the Washoe County Water Conservation District, whose function is to determine how the criteria for storage and release of water in and from Lake Tahoe shall be applied. For many years after the completion of Boca Reservoir, the decisions of this committee were carried out individually by the Truckee Carson Irrigation District, in the case of Lake Tahoe, and the Washoe County Water Irrigation District, in the case of Boca Reservoir.

However, in the early 1960's, it became apparent that a more integrated operation of the Truckee River upstream reservoirs would soon become necessary upon completion of Prosser Reservoir. Inasmuch as the Truckee River Agreement is incorporated into the 1944 Decree, and inasmuch as Claim No. 4 of that decree described the rights of the United States in the waters of Lake Tahoe, it was felt that storage and release of Lake Tahoe waters was a proper concern of the Watermaster appointed to administer that decree. Furthermore, since the Truckee River Agreement makes provision for the appointment by the three parties mentioned above of a Water Administrator to carry out in the state of California the provisions of the Truckee River Agreement (who may or may not be the said Watermaster), it was felt that the Watermaster would be the logical and proper person to assume the duties of the Water Administrator in California.

Accordingly, at the request of the three parties, the Watermaster assumed the function of directing the operation of the outlet gates at Lake Tahoe, as well as Prosser and Boca Reservoirs, subject, of course, to the direction of the committee on matters of policy.

It has been the policy of the said committee to store water in Lake Tahoe and release it therefrom in as strict compliance with the 1915 Decree and the Truckee River Agreement as possible. Due to the climatological characteristics of the Lake Tahoe Basin (the fact that the average annual evaporation is equal to 3.5 vertical feet on the surface of the lake, the fact that three consecutive drought years can completely deplete the storage in the lake, and the fact that the outlet from the lake is so restricted

that only a limited amount of water may be withdrawn at low lake elevations), the overall policy of the committee has been to hold as much water in Lake Tahoe as possible, consistent with a reasonable regard to limiting the maximum elevation of the lake to 6,229.1 feet above sea level, Bureau of Reclamation datum. At times, due to unusual precipitation patterns, extremely large releases from the lake have been necessary in order to avoid exceeding that elevation. These releases have been made only after obtaining the necessary court approval. At all times the releases are made in conformance with the provisions of the 1915 Decree and the Truckee River Agreement.

At the time of the entry of the 1915 Decree, Lake Tahoe was the only major storage facility in existence on the Truckee River. In 1938 Boca Reservoir was completed and the Truckee River Agreement became operative. At this time the demand on Lake Tahoe became less, because of the contribution of Boca Reservoir. In 1963 Prosser Reservoir was completed. One of the purposes of this reservoir was to make available, through exchange, waters from Lake Tahoe to maintain a fishery between Lake Tahoe and the confluence of Prosser Creek with the Truckee River. Because of the exchange provisions in the agreement that made Prosser Reservoir possible, the releases from Lake Tahoe into the Truckee River, except in periods of drought, will not fall below fifty cubic feet per second in winter and seventy cubic feet per second in summer.

In brief, the policy of the Truckee Basin Water Committee as carried out by the Watermaster is: (1) to maintain the level of Lake Tahoe as high as possible at all times in anticipation of prolonged periods of drought; (2) to maintain Floriston Rates through joint operation of Lake Tahoe and Boca Reservoir as prescribed in the Truckee River Agreement; (3) to regulate the level of Lake Tahoe in such a manner that it will not exceed an elevation of 6,229.1 feet above sea level at any time; and (4) to maintain fishery water in the Truckee River below the Lake Tahoe outlet whenever exchange water is available in Prosser Reservoir.

CALIFORNIA-NEVADA INTERSTATE COMPACT

In 1955, the Legislatures of both California and Nevada passed what is known as the California-Nevada Interstate Compact Commission Act. California Legislative Assembly Bill No. 1838, dated January 18, 1955 and Senate Bill No. 935 of the same date, created the California Commission. Nevada Legislature Senate Bill No. 98, dated February 7, 1955 created the Nevada Commission to cooperate with a similar commission representing the State of California in formulating and submitting to the Legislatures of both states and to the Congress of the United States for their approval, an interstate compact relative to the distribution and use the waters of Lake Tahoe and the Truckee, Carson and Walker Rivers and their tributaries and other related matters.

Senate Bill 1391, 84th Congress, 1st Session, in the Senate of the United States, was introduced March 10, 1955 granting the consent of Congress to the State of California and Nevada to negotiate and enter into a compact with respect to the distribution and use of the waters of the Truckee, Carson and Walker Rivers, Lake Tahoe and tributaries of such rivers and lake in such states. Senate Bill 1391 was approved by the 84th Congress, 1st Session and became Public Law 353, Chapter 791, which consented to the negotiation of a compact, subject in part to the participation in the negotiations of a Federal representative appointed by the President.

The first meeting of the Joint Commission of the California-Nevada Interstate Compact Commission met in Carson City, Nevada on January 17, 1956, to establish the rules of procedure, appointment of committees and discussions of engineering studies. On January 18, 1956, President Dwight D. Eisenhower appointed Robert J. Newell as the Federal representative to the California-Nevada Compact Commission.

Many meetings of the Joint Commission, the California Commission and the Nevada Commission have been held in the negotiation of the Compact. An undetermined number of special committees for each of the three river basins and the Lake Tahoe basin, plus the drafting committees, have met over the past sixteen years.

On July 25, 1968, the Joint California-Nevada Interstate Compact Commission adopted a compact concerning the water of Lake Tahoe, Truckee River, Carson River and Walker River Basins.

The 1969 Nevada Legislature passed the California-Nevada Interstate Compact, as adopted by the Joint Commission on July 25, 1968, and the Governor of Nevada signed the Compact on February 28, 1969. An amended Compact was also passed by the 1969 Nevada Legislature, to conform to a proposed compact in the California Legislature, and was signed by the Governor on April 28, 1969.

The California-Nevada Interstate Compact, as adopted by the Joint Commission on July 25, 1968, was introduced in the California Legislature by AB 58, Chappie and SB 149, Teale, but met with severe opposition and neither bill was passed by the State of California.

The 1970 California Legislature passed the California-Nevada Interstate Compact, as adopted by the Joint Commission on July 25, 1968, with some additional amendments, under AB 1350 and the Governor of California signed this Compact on September 19, 1970. This Bill then became Chapter 1480, Statutes of 1970.

The 1971 Nevada Legislature introduced and passed AB 190, which is identical to the amended Compact passed by the 1970 California Legislature. AB 190 passed the Nevada Assembly on February 22, 1971, and the Nevada Senate on February 26, 1971, and was signed by the Governor of Nevada on March 5, 1971.

On March 15, 1971, Congressman Johnson of California introduced HR 6078 in the 92nd Congress, 1st Session, granting the consent and approval of Congress to the California-Nevada Interstate Compact.

Important provisions of the California-Nevada Interstate Compact as ratified by the Legislature of both California and Nevada, relating to the Lake Tahoe Basin, are summarized as follows:

Article V. Section D, provides upon construction of the overflow weir, the total annual gross diversions for use within the Lake Tahoe Basin from all natural sources including ground water and under all water rights in said basin shall not exceed 34,000 acre-feet annually, of which 23,000 acre-feet annually is allocated to the State of California for use within said basin, and 11,000 acre-feet annually is allocated to the State of Nevada for use within said basin. After use of the water allocated herein, neither export of the water from the Lake Tahoe Basin, nor the reuse thereof prior to its return to the lake, is prohibited.

Comment – Article V allocates a definite amount of water to each State, for development, which cannot be infringed upon by the downstream users. The Compact also protects the downstream interests by setting an upper limit to the use of water in the Lake Tahoe Basin. The water allocated to each State is administered under the laws of that State.

Article V. Section E. recognizes transbasin diversions of water from the Lake Tahoe Basin in both States existing as of December 31, 1959, to the extent that such diversions are recognized as vested rights under the laws of the State where each such diversion is made.

Comment – The transbasin diversions recognized by Section E above includes diversions from Marlette Lake and from North Creek (aka Third Creek) for use in Nevada and a diversion from Echo Lake for use in California.

Article X provides that either State may use directly, by exchange, or otherwise, its allocated waters of the Truckee River Basin or the Carson River Basin in the Lake Tahoe Basin.

Article XVII allows for the importation of water by either state from another source for use within the Lake Tahoe Basin and/or the Truckee River, Carson River or the Walker River Basins.

Comment – Either State may import water for use by that State, or by agreement both states, from an outside source for use in any of the Basins included under the Compact. Water so imported would not be considered a part of the water allocated to each State.

WATER DIVERSIONS IN CALIFORNIA

Riparian and correlative, as well as appropriative, water rights doctrine prevail in California. Riparian rights exist by virtue of land contiguity with the water supply source, and provide for a sharing of the supply between riparian owners to the extent of their reasonable requirements. Correlative rights are analogous to riparian, except that they attach to land overlying a percolating ground-water source. Neither are lost by nonuse; however, use is restricted to the riparian or overlying land involved. All rights, of any nature, are limited by the California Constitution to reasonable beneficial uses.

Jurisdiction over appropriations initiated in California prior to 1941 vests in the State Superior Court for the county where the diversion is made; all later appropriations have been made under provision of the Water Commission Act, and jurisdiction is with the State Water Resources Control Board. Priority of an appropriation dates from first valid steps to take the water, and the right is valid to the extent the water has been diligently developed and used. Loss is by abandonment or three years nonuse, five years nonuse in the case of a pre-1914 appropriation.

An appropriative right is initiated by filing with the State Water Resources Control Board an application which describes the proposed taking and use of water. Others using the source, who might be affected, are notified and differences heard. If the Board deems water to be available, a permit is issued authorizing its development and use within a fixed period and in accordance with any other pertinent conditions. After use has been made, a license is issued confirming the extent of use and limiting the water right accordingly.

The California Water Resources Control Board is completing a survey of the actual water use under all types of rights in the California portion of the Tahoe Basin. Total use during 1969 is estimated at about 10,900 acre-feet under all rights, including ground-water extractions. This use includes about 1,537 acre-feet for nonconsumptive purposes, as defined by Article XIV of the proposed interstate compact. Thus about 9,360 acre-feet of 1969 diversions would be chargeable to California's 23,000 acre-foot allocation under the proposed compact.

The current use, however, is not so critical as the matter of authorized future development. Under the application-permit-license system of water rights in California, permits are issued for future prospective use. Thus, there is considerable water over and above the present use which has already been committed for future development. Also, when an application is filed for a water right permit, the applicant establishes a priority as of the date of filing for an amount of unappropriated water remaining in the source as of that date, providing it is diligently developed. Therefore, in considering what water may be available for appropriation as of this date, consideration must be given to the undeveloped permits and the pending unapproved applications. Considering all of these elements, the current situation is as follows:

Compact Allocation	23,000 acre-feet per annum
Face value of existing rights, undeveloped permits and all other uses	21,180 acre-feet per annum
Face value of unapproved applications	39,086 acre-feet per annum

In summary, use under existing rights undeveloped permits, and pending applications, totals some 37,266 acre-feet annually over the compact allocation.

California law allows for the appropriation of water in California for use in Nevada, providing reciprocity statutes continue in effect.

In order to take treated water for reuse, a permit is required from the appropriate California Regional Water Quality Control Board.

WATER DIVERSIONS AND USES IN NEVADA

The Division of Water Resources initiated a study in mid-1966 to determine the quantity of water being diverted and used in the Nevada portion of the Lake Tahoe Basin. Reliable data was furnished by major water companies from metered services, and this information was applied to similar commercial and domestic uses not metered to estimate the annual use of water in the Nevada portion.

All water filings of record were abstracted in order to make an estimate of the quantity of water appropriated and held under existing water filings. Applications that had been pending for some years have been considered and acted upon by the State Engineer.

The following table summarizes the status of all water filings of record for the Nevada portion of the Lake Tahoe Basin as of March 1, 1971:

Type of Filings	Number of Filings	Source	Total Acre-Feet
Proofs ^a	8	Streams	1,794.7
Certificates ^b	40	Streams	3,804.6
Certificates	63	Lake	681.9
Certificates	31	Underground	1,049.4
Permits ^c	11	Streams	1,802.6
Permits	17	Lake	6,135.4
Permits	6	Underground	28.8
Applications ^d	3	Streams	8,688.0
Applications	2	Lake	7,238.2
Applications	0	Underground	-
Total	181		31,223.6

^aEight proofs shown are vested rights (rights initiated prior to enactment of the appropriation statute) the limit and extent of which have been determined through the statutory adjudication procedure or through decrees in equity.

^bCompleted appropriative rights through the statutory appropriation procedure.

^cAn inchoate right initiated under the statutory appropriative procedure.

^dThe initiation for an inchoate right under the statutory appropriation procedure which has not received approval.

The totals in the above table have been calculated by expanding the diversion of water for the period of use and are only approximate because of the undetermined character of the water filings such as claims of vested rights (beneficial use prior to enactment of the appropriation statute) and applications (the initiation to appropriate water not yet approved). In addition, many certificates and permits issued prior to this study granted a diversion or flow of water, but did not place a duty or upper limit on the total amount of water to be diverted annually.

The following table is a recapitulation of the estimated total use of water in acre-feet annually for five study periods compiled from the metered water service records of major water companies and from information available in the office of the State Engineer.

Estimated Diversion of Water-Lake Tahoe, Nevada

Period	Total Acre-Feet	Percent Increase
1965/1966	3,269	+ 6.24
1966/1967	3,473	+19.44
1967/1968	4,148	+ 7.14
1968/1969	4,444	+ 3.26
1969/1970	4,589	
1965/1970		+40.38

NEVADA STATE WATER POLICY

The water policy and philosophy of the State of Nevada has been developed by over one hundred years of useage, beginning about 1849 for irrigation and mining, and is now contained in the Nevada Water Law, Nevada Revised Statutes of 1957, as amended. The fundamental right to the use of water in Nevada was completely changed in 1885 by a Nevada Supreme Court decision, reversing its stand with respect to the riparian right doctrine and has since applied the doctrine of prior appropriation. The Court concluded that the riparian doctrine, did not serve the wants and necessities of the people for either mining or agriculture.

The State water policy, procedure for acquiring a right to use water by adjudication and by appropriation the administration for the conservation, regulation and distribution of the public waters of the State above and below the ground, are provided by statute in the Nevada Water Law under Chapters 533 through 544, inclusive, Nevada Revised Statutes of 1957, as amended.

The basic concept of the present Nevada Water Law was developed from the Act of 1903, which declared all natural water courses and natural lakes, and the waters thereof, belong to the public and are subject to appropriation for a beneficial use, and the right to the use of water so appropriated for irrigation shall be appurtenant to the land to be irrigated, and beneficial use shall be the basis, the measure and the limit of the right. The philosophy of the Act of 1903 was amended and further expanded by major legislation in the Acts of 1905, 1913, and 1939. The 1913 legislation provided for the conservation of underground waters, and declared all sources of water supply within the boundaries of the State whether above or beneath the surface of the ground, belong to the public. The Act of 1939 provided the first specific legislation for the regulation of underground waters, as distinguished from all previous legislation relating to surface waters.

Briefly, a water right is acquired in Nevada only by adjudication of a claim of continual beneficial use of water prior to enactment of the water law and by application to appropriate water to a beneficial use.

Adjudication. Upon petition or a determination by the State Engineer a stream system may be adjudicated. Claims of vested rights of continual beneficial use of water prior to the enactment of the Act of 1905 are submitted to the Court of Jurisdiction for determination and decree.

Appropriation. Applications to appropriate water are filed with the State Engineer. The application is then published in a local newspaper for five consecutive weeks. After the last publication a thirty(30) day period is provided for anyone to file a protest to the granting of the application. At the end of the protest period, if there are no protests and the appropriation does not adversely affect existing rights, a permit will be granted to develop the water to a beneficial use. If protested, field investigations and hearings may be held to assist the State Engineer in making a determination.

A permit grants permission to divert a flow of water measured in cubic feet per second, and is also limited by a duty or maximum amount of water to be diverted, measured in gallons per day, per month or per year or in acre-feet per acre, per year, etc. The permit is further subject to filing proofs of due diligence, with a time set for filing the proof of beneficial use. With allowable extensions of time, the proof of beneficial use may be required approximately eight and one-half years from the date on which the permit was issued. Beneficial use is the limit, the measure and the extent of the right. For example: An application is made for quasimunicipal purposes to develop a subdivision of 150 lots. A permit is granted with sufficient water for the 150 lots, but at the end of the time set in the terms of the permit if only 75 residences were built and served with water, the certificate would be issued for only 75 residences, as only this amount of water was placed to a beneficial use, and the balance of the right would revert to the State and is subject to appropriation. Upon proof of beneficial use, a certificate is issued to become a perfected water right.

FUTURE WATER NEEDS

The Bureau of Reclamation is presently conducting a study on the feasibility of importing water to the Tahoe Basin. This study will include a range of Basin water use projections for the next 50 years.

Present water use in the Basin is estimated to be 13,936 acre-feet annually, 9,360 acre-feet in California and 4,576 in Nevada. The Lake Tahoe Area Council Study projected daily water consumption at 140 gallons per day per capita or 0.157 acre-feet per capita annually by 1980. Assuming three people per dwelling unit, if the existing 30,000 vacant subdivided lots of record are all improved with single-family dwellings (multi-family dwellings are allowed on many of the lots by present zoning), an additional 14,000 acre-feet of water will be required. Based upon the proportion of vacant lots in the two states, 2,100 acre-feet of the water would be needed in Nevada and 11,900 acre-feet in California.

Allowing additional lot and block subdivisions or planned unit developments in California, without assurance of an additional source of water over the present compact allocation, will endanger the inherent right of lot owners to make use of their property. In this event, both the owners and the local jurisdictions providing urban services will be the losers.

As indicated previously, certain water rights must be used to be established, and, after being established, can still be lost after a given period of non-use or abandonment. Therefore, the possession of water rights at the time of filing a subdivision map is no assurance that water will be available to the subsequent purchaser of a vacant lot at the time he desires to build.

SOURCE MATERIALS

Crippen, J. R. and Panelka, B. R., *The Lake Tahoe Basin, California-Nevada (Geological Survey Water-Supply Paper 1972, 1970*

Newman, William J., *Appendix VI Report of Field Investigation of Water Filings and Diversions in the Lake Tahoe Basin, Nevada, March 1971*

Mulligan, Kerry W., *Lake Tahoe Water Rights (State Water Resources Control Board Memorandum), January 26, 1970*

Lake Tahoe Area Council and Max C. Fleischmann, Foundation of Nevada, *Comprehensive Study on Protection of Water Resources, June 1963*

California Statute of 1970, Chapter 1480

Nevada Assembly Bill 190, "*An Act Amending the Text of the California-Nevada Interstate Compact to Conform Language to the Text of the Compact as Enacted by the State of California; and Providing Other Matters Properly Relating Thereto,*" 1971

HR 6078 in the 92nd Congress, 1st Session